



LUNDS UNIVERSITET
Lunds Tekniska Högskola

Course syllabus

Programmering i Java

Computer Programming in Java

EDAA10, 7,5 credits, G1 (First Cycle)

Valid for: 2023/24

Faculty: Faculty of Engineering, LTH

Decided by: PLED C/D

Date of Decision: 2023-04-18

General Information

Compulsory for: IDA1, IEA1

Language of instruction: The course will be given in Swedish

Aim

The students shall learn how to write small and medium-sized computer programs and attain basic knowledge of object-oriented programming and the programming language Java.

Learning outcomes

Knowledge and understanding

For a passing grade the student must

- be able to explain fundamental concepts in object-oriented and imperative programming
- be able to explain and give examples of use of fundamental algorithms, e.g., for searching and sorting
- be able to describe and give examples of use of fundamental data structures such as arrays, matrices and lists.

Competences and skills

For a passing grade the student must

- be able to develop and implement algorithms so solve simple problems
- be able to implement Java classes, starting from given specifications
- be able to structure programs, using classes and methods
- be able to use tools to write, test and debug programs

- be able to read program code and program documentation

Judgement and approach

For a passing grade the student must

- be able to go further on his own in the field of object oriented programming

Contents

Programs as models of real systems. Objects and operations, classes and methods. Basic Java programming, fundamental algorithms. Data structures: arrays, the class ArrayList. Inheritance, polymorphism. String classes. Object-oriented program development.

Examination details

Grading scale: TH - (U,3,4,5) - (Fail, Three, Four, Five)

Assessment: For final grades, approved compulsory course items and an approved written exam are required. In order to participate in the exam, the compulsory course items must be completed. The final grade for the course is based on the result of the written examination.

The examiner, in consultation with Disability Support Services, may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equivalent to that of a student without a disability.

Parts

Code: 0111. **Name:** Compulsory Course Item.

Credits: 4,5. **Grading scale:** UG. **Assessment:** For a passing grade, approved programming assignments is required. **Contents:** Programming assignments.

Code: 0211. **Name:** Written Examination.

Credits: 3. **Grading scale:** TH. **Assessment:** Approved examination. **Contents:** Written examination. **Further information:** The final grade of the course is based on the result of the written examination. To qualify for the written examination, students must have completed the compulsory course items.

Admission

The number of participants is limited to: No

The course overlaps following course/s: EDA010, EDA011, EDA015, EDA016, EDA017, EDA390, EDA500, EDA501, EDA616, EDA618, EDAA20, EDAA50, EDAA55, EDAA65, EDAA45

Reading list

- Downey, A. & Mayfield, C.: Think Java, How to Think Like a Computer Scientist. O'Reilly, 2019, ISBN: 978-1-492-07250-8. Second Edition. The authors maintains an online version at <https://greenteapress.com/wp/think-java-2e/>.

Contact and other information

Course coordinator: Nazila Hasanzade, nazila.hasanzade@cs.lth.se

Course homepage: <http://cs.lth.se/edaa10>

Further information: This course is given at Campus Helsingborg.